

=> fil reg; d stat que 19; fil capl;d que nos 110; fil uspatf; d que nos 111

FILE 'REGISTRY' ENTERED AT 10:10:49 ON 16 APR 2003

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STRUCTURE FILE UPDATES: 15 APR 2003 HIGHEST RN 503084-53-5 DICTIONARY FILE UPDATES: 15 APR 2003 HIGHEST RN 503084-53-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

Page 1-A

Yu

Page 2-A VAR G1=42/10/26/18/22/14 REP G2=(4-4) CH2 REP G3=(3-3) CH2 VAR G4=78/80/I-BU/S-BU/69 NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 79

STEREO ATTRIBUTES: NONE

(L9 48 SEA FILE=REGISTRY SSS FUL L7 AND L3)

100.0% PROCESSED 248614 ITERATIONS

SEARCH TIME: 00.00.06

48 ANSWERS

FILE 'CAPLUS' ENTERED AT 10:10:49 ON 16 APR 2003
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FILE COVERS 1907 - 16 Apr 2003 VOL 138 ISS 16 FILE LAST UPDATED: 15 Apr 2003 (20030415/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

Yu

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SCR 1127 AND 1008 AND 1235
L3
L7
                 STR
              48 SEA FILE=REGISTRY SSS FUL L7 AND L3
L9
              11 SEA FILE=CAPLUS ABB=ON 19
/L10
FILE 'USPATFULL' ENTERED AT 10:10:49 ON 16 APR 2003
 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Apr 2003 (20030415/PD)
FILE LAST UPDATED: 15 Apr 2003 (20030415/ED)
HIGHEST GRANTED PATENT NUMBER: US6550063
HIGHEST APPLICATION PUBLICATION NUMBER: US2003070199
CA INDEXING IS CURRENT THROUGH 15 Apr 2003 (20030415/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Apr 2003 (20030415/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2003
     USPAT2 is now available. USPATFULL contains full text of the
                                                                         <<<
                                                                         <<<
     original, i.e., the earliest published granted patents or
     applications. USPAT2 contains full text of the latest US
                                                                         <<<
 >>>
     publications, starting in 2001, for the inventions covered in
                                                                         <<<
 >>>
     USPATFULL. A USPATFULL record contains not only the original
                                                                         <<<
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                                                                         <<<
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     published document but also a list of any subsequent
                                                                         <<<
>>>
     publications. The publication number, patent kind code, and
                                                                         <<<
     publication date for all the US publications for an invention
 >>>
     are displayed in the PI (Patent Information) field of USPATFULL
                                                                         <<<
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     records and may be searched in standard search fields, e.g., /PN, <<<
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     /PK, etc.
     USPATFULL and USPAT2 can be accessed and searched together
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     through the new cluster USPATALL. Type FILE USPATALL to
>>>
                                                                         <<<
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     enter this cluster.
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     Use USPATALL when searching terms such as patent assignees,
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                                                                         <<<
     classifications, or claims, that may potentially change from
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                                                                         <<<
     the earliest to the latest publication.
 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
                 SCR 1127 AND 1008 AND 1235
L3
L7
                 STR
L9
              48 SEA FILE=REGISTRY SSS_FUL_L7_AND L3
[L11
               2 SEA FILE=USPATFULL ABB=ON_L9_
=>_dup_rem_110,111
 FILE 'CAPLUS' ENTERED AT 10:10:53 ON 16 APR 2003
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12 DUP REM L10 L11 (1 DUPLICATE REMOVED)

PROCESSING COMPLETED FOR L10 PROCESSING COMPLETED FOR L11

L1-3

ANSWERS '1-11' FROM FILE CAPLUS ANSWER '12' FROM FILE USPATFULL

> d ibib abs hitstr 1-12; fil cao; d que nos 112; fil home

L13 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

ACCESSION NUMBER: 2002:294253 CAPLUS

DOCUMENT NUMBER: 136:321988

TITLE: Lytic peptide prodrugs

INVENTOR(S): Yu, Xianxhang; Wagner, Thomas E.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S.

Ser. No. 851,422.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English .

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE		APPLICATION NO.	DATE
US 2002045736	A1	20020418		US 2001-938623	20010827
US 2002077454	A1	20020620		US 2001-851422	20010509
PRIORITY APPLN. INFO.	:		US	2001-851422 A	2 20010509
			US	2000-203063P P	20000509
			US	2000-212042P P	20000616

AB A cytotoxin can be rendered non-toxic by charge neutralizing the amino acids salient to pore assembly and/or sterically inhibiting formation of the peptide's active conformation. In the presence of specific proteases, the inactive peptide or procytotoxin can be activated to assemble into its lytic conformation and selectively destroy a target cell.

IT 374107-26-3P 412966-60-0P 412966-61-1P 412966-62-2P

RL: BCP (Biochemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(lytic peptide prodrugs)

RN 374107-26-3 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-L-lysyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Page 6

PAGE 1-C

_NH2

___ Ph

HO₂C S NH
$$\frac{CO_2H}{NH_2}$$
 R $\frac{CO_2H}{NH_2}$ R

RN 412966-60-0 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-L-lysyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Yu

PAGE 1-B

NH2

PAGE 1-C

RN 412966-61-1 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-phenylalanyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-phenylalanyl- (9CI) (CA INDEX NAME)

Yu

PAGE 1-B

Ph

PAGE 2-B

PAGE 3-B

RN 412966-62-2 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-L-glutaminyl-(9CI) (CA INDEX NAME)

PAGE 1-B

$$H_2N$$
 S
 N
 H

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PAGE 3-A

$$H_2N$$
 R^2
 R
 R^2
 R

PAGE 4-A

L13 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:833364 CAPLUS

136:595 DOCUMENT NUMBER:

Antitumor pore-forming procytotoxic peptides TITLE:

Yu; Xianxhang; Wagner, Thomas En INVENTOR(S): Greenville Hospital System, USA PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	CENT :	NO.		KI	ND	DATE			A	PPLI	CATI	ON NC	ο.	DATE			
WO 2001085777		A:	2	20011115			WO 2001-US40690 20010509										
WO 2001085777		A.	3	20020307													
	W:	AL,	AM,	ΑT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CO,	CU,	CZ,
		DE,	DK,	EC,	EE,	ES,	FI,	GB,	GE,	HU,	ID,	IL,	IS,	JP,	KE,	KG,	KP,
		KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MK,	MN,	MW,	MX,	NO,
		NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	UA,
		ŪG,	US,	UZ,	VN,	YU,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	TM	
	RW:	GH,	GM,	ΚE,	LS,	MW,	ΜZ,	SD,	SL,	SZ,	ΤZ,	UG,	ZW,	ΑT,	BE,	CH,	CY,
		DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	ΙΤ,	LU,	MC,	NL,	PT,	SE,	TR,	BF,
		ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GW,	ML,	MR,	ΝE,	SN,	TD,	TG		
EP 1282642			A:	2	20030	0212		E	P 20	01-9	3340'	7	2001	0509			
	R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙT,	LI,	LU,	NL,	SE,	MC,	PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-203063P P 20000509

US 2000-212042P P 20000616

WO 2001-US40690 W 20010509

OTHER SOURCE(S): MARPAT 136:595

AB A class of procytotoxic agents is characterized by a capability to kill with target cell-specificity. Such an aspect can be a pore-forming protein which has at least one lysine residue, modified by a peptide linkage to an amino acid residue, via the epsilon amino group. These agents are useful in treating cancer, esp. prostate cancer.

IT 374107-25-2 374107-26-3 374107-27-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antitumor pore-forming procytotoxic peptides)

RN 374107-25-2 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-arginyl-L-lysyl-L-arginyl-L-arginyl-L-arginyl-L-glutaminyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

Yu

PAGE 2-A

NH2

H2N

NH

(CH2)
$$3$$

NH2

HN

O

(CH2) 4

NH

NH

NH2

PAGE 3-A

Yu

PAGE 4-A

$$H_2N$$
 H_2N
 H_3
 CH_2
 CH_2
 H_3
 NH_2
 CH_2
 NH
 O

PAGE 5-A

PAGE 6-A

RN 374107-26-3 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alphá.-aspartyl-L-lysyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Page 18

Yu

PAGE 1-C

NH₂

___ Ph

PAGE 2-A

RN 374107-27-4 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-(L-gamma.-glutamyl-L-gamma.-glutamyl)-L-lysyl-L-arginyl-N6-(L-gamma.-glutamyl-L-gamma.-glutamyl)-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-C

.gamma.-glutamyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-Lisoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-.gamma.-glutamyl(9CI) (CA INDEX NAME) '

Absolute stereochemistry.

PAGE 2-A

PAGE 3-A

RN 374107-15-0 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-phenylalanyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-phenylalanyl- (9CI) (CA INDEX NAME)

Yu

PAGE 1-B

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PAGE 3-A

PAGE 3-B

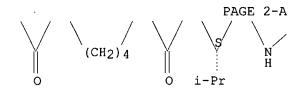
RN 374107-16-1 CAPLUS

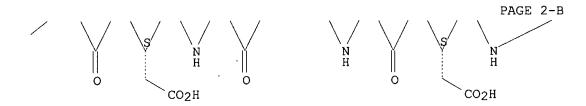
CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-tyrosyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-tyrosyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-tyrosyl- (9CI) (CA INDEX NAME)

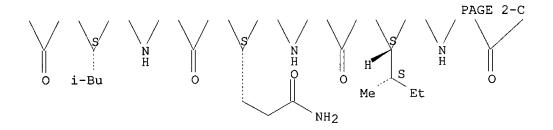
Yu

PAGE 1-C

PAGE 1-D







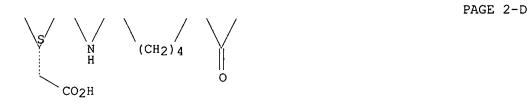


RN 374107-17-2 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-tryptophyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-tryptophyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-tryptophyl- (9CI) (CA INDEX NAME)

PAGE 1-C

PAGE 1-D



RN 374107-18-3 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-lysyl-L-lysyl-L-leucyl-L-isoleucyl-L-isoleucyl-L-isoleucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-lysyl- (9CI) (CA INDEX NAME)

PAGE 1-A

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PAGE 3-A

RN 374107-19-4 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-arginyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-arginyl- (9CI) (CA INDEX NAME)

PAGE 1-A

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PAGE 2-A

$$CO_{2}H$$
 $H_{2}N$
 NH_{2}
 $H_{2}N$
 NH_{2}
 $H_{2}N$
 NH_{2}
 $H_{2}N$
 NH_{3}
 $H_{3}N$
 $H_{4}N$
 $H_{5}N$
 $H_{$

PAGE 2-B

PAGE 3-A

RN 374107-20-7 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-.gamma.-glutamyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 3-A

PAGE 5-A

RN 374107-21-8 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

Yu

PAGE 1-B

PAGE 3-A

PAGE 4-B

RN 374107-22-9 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-tyrosyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-tyrosyl-L-lysyl-L-arginyl-N6-L-tyrosyl-L-lysyl-L-arginyl-L-glutaminyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-C

PAGE 2-B

PAGE 2-C

RN

374107-23-0 CAPLUS L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-CN tryptophyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-Lprolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L- $\verb|tryptophyl-L-lysyl-L-arginyl-N6-L-tryptophyl-L-lysyl-L-arginyl$ glutaminyl- (9CI) (CA INDEX NAME)

PAGE 1-A

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PAGE 2-B.

PAGE 2-D

RN 374107-24-1 CAPLUS

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-lysyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

`он

PAGE 3-A

i-Bu S NH R2 NH R2 NH2
$$(CH_2)_{4}$$
 S NH O

PAGE 4-A

PAGE 4-B

L13 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:712128 CAPLUS

DOCUMENT NUMBER: 136:63713

TITLE: In vitro targeted killing of prostate tumor cells by a

synthetic amoebapore helix 3 peptide modified with two .gamma.-linked glutamate residues at the COOH terminus

AUTHOR(S): Warren, Patrick; Li, Laiji; Song, Wendy; Holle, Eric;

Wei, Yangzhang; Wagner, Thomas; Yu, Xianzhong

CORPORATE SOURCE: Greenville Hosp. System, Oncology Research Institute,

Greenville, SC, 29605, USA

SOURCE: Cancer Research (2001), 61(18), 6783-6787

CODEN: CNREA8; ISSN: 0008-5472

PUBLISHER: American Association for Cancer Research

DOCUMENT TYPE: . Journal LANGUAGE: English

AB Prostate-specific membrane antigen (PSMA) is a trans-membrane protein specifically expressed in LNCaP cells, malignant human prostate tissues, and the surrounding neovasculature. PSMA is a unique exopeptidase with reactivity toward poly-.gamma.-glutamated folates. It can sequentially remove the poly-.gamma.-glutamyl termini. To target prostate tumor cells, a novel procytolytic peptide was designed with a backbone consisting of an amoebapore H3 domain modified by two .gamma.-linked glutamate residues at the .epsilon.-amino group of the COOH-terminal lysine residue. The strategy behind the design of this prolytic peptide was to inactivate the lytic amoebapore H3 peptide by replacing its functionally important COOH-terminal pos. charge with neg. charged groups, which in turn might be selectively removed by the PSMA exopeptidase. This peptide exhibited little cytolytic activity toward PSMA-neg. cells, such as PC-3 cells. On the other hand, this peptide exhibited strong cytolytic activity toward PSMA-pos. LNCaP cells in a concn.-dependent manner. The carboxypeptidase inhibitor 4,4'-phosphonicobis(butane-1,3-dicarboxylic acid) can inhibit this activity. Moreover, this peptide also exhibited cytolytic activity toward PSMA cDNA-transfected PC-3 cells.

IT 384831-96-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(in vitro targeted killing of prostate tumor cells by a synthetic amoebapore helix 3 peptide modified with two .gamma.-linked glutamate residues at COOH terminus)

RN 384831-96-3 CAPLUS

CN

L-Lysinamide, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-L-lysyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-leucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

PAGE 1-B

PAGE 1-C

REFERENCE COUNT:

THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 12

CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:

1998:733704 CAPLUS

DOCUMENT NUMBER:

130:77807

TITLE:

Purification of a galanin degrading 70 kDa

Searched by Barb O'Bryen, STIC 308-4291

AUTHOR(S):

SOURCE:

PUBLISHER:

CORPORATE SOURCE:

metallo-peptidase from bovine spinal cord Jureus, A.; Lindgren, M.; Langel, U.; Bartfai, T.

Department of Neurochemistry and Neurotoxicology, Stockholm University, Stockholm, S-10691, Swed. Neuropeptides (Edinburgh) (1998), 32(5), 453-460

CODEN: NRPPDD; ISSN: 0143-4179

Churchill Livingstone

DOCUMENT TYPE: Journal LANGUAGE: English

AB Galanin is a 29/30 amino acids long neuroendocrine peptide, acting as an inhibitory modulator in the spinal cord. Several studies show that galanin is involved in control of pain threshold and acts synergistically with morphine, hence, inhibition of galanin degrdn. may be a pharmaceutical target for treatment of pain. In this study we have designed an 11 amino acids long substrate based on the first 10 N-terminal amino acids of galanin (this part contains the major pharmacophores of galanin), with a N-terminal fluorescent marker, anthranilic acid, and a C-terminal internal fluorescence quencher, 3-nitrotyrosine, coupled to the epsilon.-amino group of the linker Lys11. Using this substrate to detect galanin degrdn., we have purified a membrane bound galanin inactivating metallo-peptidase from bovine spinal cord. This enzyme, cleaving galanin between Trp2 and Thr3, is a novel 70 kDa, Zn2+ dependent metallo-peptidase.

IT 218787-41-8P

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(purifn. of a galanin-degrading metallo-peptidase from bovine spinal cord)

RN 218787-41-8 CAPLUS

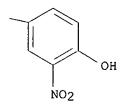
CN L-Lysinamide, N-(2-aminobenzoyl)glycyl-L-tryptophyl-L-threonyl-L-leucyl-L-asparaginyl-L-seryl-L-alanylglycyl-L-tyrosyl-L-leucyl-N6-(3-nitro-L-tyrosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-C



REFERENCE COUNT:

21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2003 ACS ACCESSION NUMBER:

DOCUMENT NUMBER:

1997:270236 CAPLUS

TITLE:

127:62253

The rational design of TAP inhibitors using peptide

substrate modifications and peptidomimetics

AUTHOR(S):

Gromme, Monique; Van der Valk, Richard; Sliedregt, Karen; Vernie, Leen; Liskamp, Rob; Hammerling, Gunter;

Koopmann, Jens Oliver; Momburg, Frank; Neefjes,

Jacques

CORPORATE SOURCE:

Division Cellular Biochemistry, Netherlands Cancer

Institute, Amsterdam, 1066 CX, Neth.

SOURCE:

European Journal of Immunology (1997), 27(4), 898-904

CODEN: EJIMAF; ISSN: 0014-2980

PUBLISHER:

VCH

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB Various alterations of the peptide substrate were studied to synthesize inhibitors for the major histocompatibility complex (MHC)-encoded transporter assocd. with antigen processing (TAP). It was concluded that TAP is stereospecific and that peptide bonds engineered into isosteric structures can improve translocation of the peptide. TAP is able to translocate peptides with large side chains that correspond to a peptide of 21 amino acids in extended conformation. Peptides with longer side chains compete for the peptide binding site of TAP but fail to be translocated. They represent the 1st rationally designed inhibitors of TAP.

IT 191219-40-6P

RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process)

(peptides for TAP inhibitors design, stereoisomers and amino acid sequences)

RN 191219-40-6 CAPLUS

CN L-Tyrosine, L-alanyl-L-arginyl-L-alpha.-aspartyl-L-asparaginyl-L-alanyl-L-threonyl-N6-L-lysyl-L-lysyl-L-alpha.-aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

__CO2H

Yu 09/851422 • Page 58

L13 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:34184 CAPLUS

DOCUMENT NUMBER: 118:34184

TITLE: Conformational and aggregational states of

.omega.-aminoacylmelittin_derivatives

AUTHOR(S): Ramalingam, Kalaiyarasi; Bello, Jake

CORPORATE SOURCE: Dep. Chem., State Univ. New York, Buffalo, NY, 14263,

USA

SOURCE: Biochemistry (1993), 32(1), 253-9

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal LANGUAGE: English

AB The authors detd. the effect of displacing the pos. charges of the amino groups of N-terminal glycine and lysine residues away from the backbone of melittin in coil-to-helix transitions by using .omega.-aminoacyl derivs. of melittin. These were prepd. by acylating the amino groups of melittin with .omega.-amino acids to yield the melittin derivs. glycylmelittin (MLT-2), (4-aminobutanoyl) melittin (MLT-4), and (5-aminopentanoyl) melittin (MLT-5), resp. At pH 7.2, there is a chain-length-dependent increase in helicity from MLT to MLT-5. The .omega.-aminoacylmelittin derivs. also show a concn.-dependent increase in helicity at pH 7.2. However, at pH 2.3, a concn.-independent, but chain length-dependent increase in helicity was obsd. A hydrophilic deriv. glycylglycylmelittin (MLT-GG) and a hydrophobic deriv. MLT-5, which have side chains of equal length, show similar helicity, at pH 7.2, but at pH 2.3 MLT-GG shows almost no helicity, while MLT-5 is about 60% helical. The lysyl deriv. (MLT-K), which has addnl. pos. charges compared to melittin, behaves much like MLT-2. At pH 7.2, all the derivs. exhibit both cold- and heat-induced denaturation; a significant amt. of residual structure is retained in the temp. range 80-100.degree.. These results are discussed in terms of the electrostatic and hydrophobic interactions involving the side chains.

IT 145204-13-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and aggregation and conformation of, structure in relation to)

RN 145204-13-3 CAPLUS

CN Melittin (honeybee), N-L-lysyl-7-(N6-L-lysyl-L-lysine)-21-(N6-L-lysyl-L-lysine)-23-(N6-L-lysyl-L-lysine)- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

H2N (CH2) 4 S NH S (CH2) 3 NH NH2

$$(CH_2)$$
 4 S NH S (CH2) 4 NH

 (CH_2) 3 S N S (CH2) 4 NH

 (CH_2) 4 S NH

 (CH_2) 6 NH

 (CH_2) 8 NH

 (CH_2) 8 NH

 (CH_2) 9 NH

PAGE 2-B

PAGE 4-A

PAGE 5-A

$$H_2N$$
 O O R_4

L13 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2003 ACS ACCESSION NUMBER: 1994:107692 CAPLUS

DOCUMENT NUMBER: 120:107692

TITLE:

SOURCE:

Peptide-encoding for structure determination of

nonsequenceable polymers within libraries synthesized

and tested on solid-phase supports

Nikolaiev, V.; Stierandova, A.; Krchnak, V.; AUTHOR(S):

Seligmann, B.; Lam, K. S.; Salmon, S. E.; Lebl, M.

Selectide Corp., Tucson, AZ, 85737, USA Peptide Research (1993), 6(3), 161-70

CODEN: PEREEO; ISSN: 1040-5704

CORPORATE SOURCE:

Journal English

DOCUMENT TYPE: LANGUAGE:

AB A method of indirectly detg. the structure of nonpeptide or nonsequenceable compds. that have been synthesized on individual particles of solid support is described. The technique permits the parallel synthesis of a compd. that is not susceptible to Edman degrdn. (e.g., N-terminal-blocked peptide), or one contg. components that cannot be identified by amino acid sequencing, together with a corresponding "coding" peptide. Each coupling step in the assembly of the nonsequenceable compd. is followed by the coupling of an amino acid to a different attachment site of the same carrier particle, whereby the amino acid unambiguously codes for the previously coupled building block of the nonsequenceable compd. The rationale is to enable the sequence detn. of a biol. active compd. that has been identified through the screening of a library of nonsequenceable compds., by translating the sequence of its "coding" peptide, detd. by Edman degrdn., into the structure of the active The technique facilitates the construction and screening of nonpeptide libraries for the discovery of important pharmaceutical compds.

ΙT 152768-59-7P 152768-60-0P 152768-61-1P 152768-62-2P 152768-63-3P 152768-64-4P 152768-65-5P 152768-66-6P 152768-67-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, by solid-phase methods, amino acid coding scheme for)

RN 152768-59-7 CAPLUS

L-Lysine, N6-[N-[4-[[[2-[(cyclohexylacetyl)amino]ethyl]thio]methyl]benzoyl CN]-L-tryptophyl]-N2-[N-(N-glycylglycyl)-L-leucyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 152768-60-0 CAPLUS

CN [(phenoxyacetyl)amino]ethyl]thio]methyl]benzoyl]-L-tryptophyl]- (9CI) INDEX NAME)

RN 152768-61-1 CAPLUS

CN L-Lysine, N2-[N-(N-L-leucylglycyl)-L-leucyl]-N6-[N-[4-[[[2-[[(4-pyridinylthio)acetyl]amino]ethyl]thio]methyl]benzoyl]-L-tryptophyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

RN 152768-62-2 CAPLUS

CN L-Lysine, N6-[N-[4-[[(cyclohexylacetyl)(phenylmethyl)amino]methyl]benzoyl]-L-tryptophyl]-N2-[N-(N-glycyl-L-alanyl)-L-leucyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 152768-63-3 CAPLUS

CN L-Lysine, N2-[N-(N-L-alanyl-L-alanyl)-L-leucyl]-N6-[N-[4-[[(phenoxyacetyl)(phenylmethyl)amino]methyl]benzoyl]-L-tryptophyl]- (9CI) (CA INDEX NAME)

Yu

RN 152768-64-4 CAPLUS

CN L-Lysine, N2-[N-(N-L-leucyl-L-alanyl)-L-leucyl]-N6-[N-[4-[(phenylmethyl)[(4-pyridinylthio)acetyl]amino]methyl]benzoyl]-L-tryptophyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 152768-65-5 CAPLUS

. CN L-Lysine, N6-[N-[4-[(cyclohexylacetyl)(4-methyl-1-piperazinyl)amino]methyl]benzoyl]-L-tryptophyl]-N2-[N-(N-glycyl-L-leucyl)-L-leucyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

RN 152768-66-6 CAPLUS
CN L-Lysine, N2-[N-(N-L-alanyl-L-leucyl)-L-leucyl]-N6-[N-[4-[[(4-methyl-1-piperazinyl)(phenoxyacetyl)amino]methyl]benzoyl]-L-tryptophyl]- (9CI) (CA INDEX NAME)

RN 152768-67-7 CAPLUS

CN L-Lysine, N2-[N-(N-L-leucyl-L-leucyl)-L-leucyl]-N6-[N-[4-[[(4-methyl-l-piperazinyl)[(4-pyridinylthio)acetyl]amino]methyl]benzoyl]-L-tryptophyl]-(9CI) (CA INDEX NAME)

PAGE 2-A
S

L13 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1974:536493 CAPLUS

DOCUMENT NUMBER: 81:136493

TITLE: Compounds related to colistin. 6. Synthesis and

antibacterial activity of acylpentapeptides. 1 Kurihara, Tozaburo; Takeda, Hideo; Ito, Hideo

AUTHOR(S): Kurihara, Tozaburo; Takeda, Hideo; It CORPORATE SOURCE: Tohoku Coll. Pharm., Sendai, Japan

SOURCE: Yakugaku Zasshi (1974), 94(8), 1004-9

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal LANGUAGE: Japanese

AB Twelve RCO-Lys-Thr-Lys(Lys)-D-Leu [I, R = e.g., Me(CH2)n, n = 6.8,

EtCHMe(CH2)4, Me2CHCH2SCH2CH2, PhCOCH2CH2, Ph2CH, 2-(2-furyl)vinyl) were tested against 15 bacteria and 5 had half the activity of colistin sulfate against gram-neg. bacteria. OHC-Lys(N.alpha., N.epsilon.-

dibenzyloxycarbonyl-L-lysine)-D-Leu-OMe was condensed with OHC-Lys(CO2CH2Ph)-Thr followed by deformylation, deesterification

acylation with RCOCl, and debenzoxycarbonylation to give I.

IT 53917-68-3P 53917-69-4P 53917-70-7P

53917-71-8P 53917-72-9P 53917-73-0P

53917-74-1P 53917-75-2P 53917-76-3P

53917-77-4P 53917-78-5P 53917-79-6P

53947-75-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological

study); PREP (Preparation)
 (prepn. and bactericidal activity of)

RN 53917-68-3 CAPLUS

CNV D-Leucine, N-[N6-L-lysyl-N2-(N-L-lysyl-L-threonyl)-L-lysyl]-,

tetrahydrochloride (9CI) (CA INDEX NAME)

•4 HCl

RN 53917-69-4 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-(1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

RN 53917-70-7 CAPLUS
CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

PAGE 1-B

RN 53917-71-8 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-(1-oxodecyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HC1

RN 53917-72-9 CAPLUS

CN D-Leucine, N-[N2-[N-[N2-(3,7-dimethyl-1-oxooctyl)-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HC1

PAGE 1-B

- (CH₂)₃- CHMe₂

RN 53917-73-0 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-[(2-methylpropyl)thio]-1-oxopropyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

53917-74-1 CAPLUS RN

D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-[(3-methylbutyl)thio]-1-oxopropyl]-L-CN lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

HCl

RN

 $\begin{array}{lll} 53917-75-2 & \texttt{CAPLUS} \\ \texttt{D-Leucine, N-[N2-[N-[N2-(1,4-\texttt{dioxo-4-phenylbutyl)-L-lysyl]-L-threonyl]-N6-} \end{array}$ CN L-lysyl-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

RN 53917-76-3 CAPLUS

CN D-Leucine, N- $\{N6-L-lysyl-N2-[N-[N2-[1-oxo-3-[(phenylmethyl)thio]propyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)$

●3 HCl

RN 53917-77-4 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[1-oxo-3-[(2-phenylethyl)thio]propyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

RN 53917-78-5 CAPLUS
CN D-Leucine, N-[N2-[N-[N2-(diphenylacetyl)-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HC1

RN 53917-79-6 CAPLUS
CN D-Leucine, N-[N2-[N-[N2-[3-(2-furanyl)-1-oxo-2-propenyl]-L-lysyl]-Lthreonyl]-N6-L-lysyl-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HCl

PAGE 1-B

- NH₂

RN 53947-75-4 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-(5-nitro-2-furanyl)-1-oxo-2-propenyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

●3 HC1

PAGE 1-B

- (CH₂)₄ - NH₂

IT 54171-07-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 54171-07-2 CAPLUS

CN D-Leucine, N-[N2-[N-[N2-[3-(5-nitro-2-furanyl)-1-oxo-2-propenyl]-N6-[(phenylmethoxy)carbonyl]-L-lysyl]-L-threonyl]-N6-[N2-[(phenylmethoxy)carbonyl]-L-lysyl]-L-lysyl]- (9CI) (CA INDEX NAME)

PAGE 1-B

---- O- CH2- Ph

- (CH₂)₄ - NH₂

L13 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1973:148239 CAPLUS

DOCUMENT NUMBER: 78:148239

TITLE: Colistin analogues

INVENTOR(S): Kurihara, Tousaburo; Ito, Hideo; Takeda, Hideo

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

AΒ

PATENT NO. KIND DATE APPLICATION NO. DATE

JP 48005715 B4 19730124 JP 1971-39366 19710607

The colistin analog I (Moa = EtCHMe(CH2)4CO), with anti- bacterial activity, was prepd. by fragment coupling using dicyclo-

hexylcarbodiimide. Thus, Moa-Lys (Z)-Thr-Lys-(Z)-Lys-OMe (Z =PhCH2O2C) was coupled with CHO-Leu-Lys(Z)-Lys(Z)-Thr. After hydrolysis of the terminal ester group, the product was coupled with Lys(Z)-D-Leu-OMe and the protective groups removed to give 80% I.

IT 40904-95-8P

RN 40904-95-8 CAPLUS

CN D-Leucine, N-[N2-[N2-[N2-(N2-L-leucyl-L-lysyl)-L-lysyl]-L-threonyl]-N6[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-Llysyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

L13 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS ACCESSION NUMBER: 1972:419994 CAPLUS

DOCUMENT NUMBER: 77:19994

TITLE: Compounds related to colistin. V. Synthesis and

pharmacological activity of colistin analogs Kurihara, Tozaburo; Takeda, Hideo; Ito, Hideo

CORPORATE SOURCE: Tohoku Coll. Pharm., Sendai, Japan Yakugaku Zasshi (1972), 92(2), 129-34

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal LANGUAGE: Japanese

AB A lysine-colistin, an analog of the natural antibiotic colistin, was synthesized by the cyclization of linear decapeptide obtained from acyl-tetrapeptide, formyl-tetrapeptide, and dipeptide by a stepwise reaction. Lysine-colistin as a new peptide contg. six moles of lysine instead of six moles of .alpha.,.gamma.-diaminobutyric acid in colistin. Lysine-colistin and linear acyl-decapeptide had the same antibiotic activity as colistin against many gram-neg. bacteria.

IT 36703-38-5P

AUTHOR(S):

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and antibacterial activity of)

RN 36703-38-5 CAPLUS

CN L-Leucine, N-[N2-[N2-[N2-(N2-L-leucyl-L-lysyl)-L-lysyl]-L-threonyl]-N6[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-Llysyl]-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-A

IT 36735-92-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 36735-92-9 CAPLUS

CN L-Lysine, N2-[N-[N2-(N2-L-leucyl-L-lysyl)-L-lysyl]-L-threonyl]-N6-[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●x HCl

PAGE 1-B

OH

$$\begin{array}{c|c}
H \\
N \\
\hline
O \\
Me
\end{array}$$
(CH₂)₄ Et

≈o

L13 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:

1969:491861 CAPLUS

DOCUMENT NUMBER:

71:91861

TITLE:

Synthesis of a fragment of a lysine analog of

polymyxin M. Pelargonyl-L-lysyl-L

threonyl-L-lysyl-Ne-(L-lysyl-D-leucyl-L-lysyl-L-

threonyl)-L-lysine hydrazide

AUTHOR(S):

Oksenoit, E. S.; Morozova, E. A.; Gorbacheva, E. N.;

Fokina, E. E.

CORPORATE SOURCE:

USSR

SOURCE:

Zhurnal Obshchei Khimii (1969), 39(7), 1654

CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE:

Journal Russian

LANGUAGE:

To 0.27 g. N.alpha.-tert-butoxycarbonyl-N.epsilon.-carbobenzoxy-L-lysyl-D-leucyl-N-carbobenzoxy-L-lysyl-L-threonine hydrazide (m. 140-2.degree.) in EtOAc and 3N HCl was added at -10.degree.3 mg. NaNO2 and after 10 min. the org. ext. yielded a soln. of the corresponding azide, which treated in situ with N.alpha.-pelargonyl-N.epsilon.-carbobenzoxy-L-lysyl-L-threonyl-N.epsilon.-carbobenzoxy-L-lysyl-L-lysine Me ester in EtOAc at -10.degree. gave in days, finally at room temp., 81% N.alpha.-pelargonyl-N.epsilon.-carbobenzoxy-L-lysyl-L-threonyl-N.epsilon.-carbobenzoxy-L-lysyl-N.epsilon.-(N.alpha.-tert-butoxycarbonyl-N.epsilon.-carbobenzoxy-L-lysyl-D-leucyl-N.epsilon.-carbobenzoxy-L-lysyl-L-threonyl)-L-lysine Me ester, m. 140.3.degree., [.alpha.]20D -12.3.degree.. This with N2H4 in MeOH, finally at 60.degree., gave in 5 hrs. the correspond ing hydrazide, m. 170-5.degree., [.alpha.]20D -13.7.degree., which was hydrogenated in AcOH

-25.45.degree.. Its compn. was verified by hydrolysis. IT 23816-18-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)
RN 23816-18-4 CAPLUS

CN Lysine, N6-[N-[N2-(N-L-lysyl-D-leucyl)-L-lysyl]-L-threonyl]-N2-[N2-[N-(N2-nonanoyl-L-lysyl)-L-threonyl]-L-lysyl]-, hydrazide, L- (8CI) (CA INDEX NAME)

over Pd black to the title compd., m. 74.degree., [.alpha.]20D

PAGE 1-A

Yu

PAGE 1-B

L13 ANSWER 12 OF 12 USPATFULL

ACCESSION NUMBER: 2002:149295 USPATFULL

TITLE: Therapeutic pore-forming peptides

INVENTOR(S): Yu,—Xianxhang, Mauldin, SC, UNITED STATES
Wagner,—Thomas=E., Greer, SC, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002077454	A1	20020620	
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· NUMBER DATE

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20007-5109

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Page(s)

LINE COUNT: 1023

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A class of procytotoxic agents is characterized by a capability to kill with target cell-specificity. Such an aspect can be a pore-forming protein which has at least one lysine residue, modified by a peptide linkage to an amino acid residue, via the epsilon amino group. These agents are useful in treating cancer, especially prostate cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 374107-25-2 374107-26-3 374107-27-4

(antitumor pore-forming procytotoxic peptides)

RN 374107-25-2 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-

prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-arginyl-L-lysyl-L-arginyl-N6-L-arginyl-L-lysyl-L-arginyl-L-glutaminyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

WH2N

H2N

NH2

HN

(CH2)
$$\frac{H}{S}$$

(CH2) $\frac{1}{4}$

NH

NH2

NH2

PAGE 3-A

PAGE 4-A

$$H_{2}N$$
 $H_{2}N$
 $H_{3}N$
 $H_{2}N$
 $H_{3}N$
 $H_{4}N$
 $H_{5}N$
 H

Yu

PAGE 5-A

RN 374107-26-3 USPATFULL

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-L-lysyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

Yu

PAGE 1-C

___ Ph

HO₂C S NH CO₂H R
$$_{N}$$
 $_{N}$ $_{N}$ $_{N}$ $_{H}$ $_{N}$ $_{N}$ $_{H}$ $_{N}$ $_{N}$

RN 374107-27-4 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-L-lysyl-L-valyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-(L-.gamma.-

glutamyl-L-.gamma.-glutamyl)-L-lysyl-L-arginyl-N6-(L-.gamma.-glutamyl-L.gamma.-glutamyl)-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Yu

PAGE 1-B

Yu

PAGE 1-C

PAGE 2-B

L-.gamma.-glutamyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-

 $isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-.gamma.-glutamyl-(9CI) \quad (CA INDEX NAME)$

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

Yu

PAGE 3-A

RN 374107-15-0 USPATFULL

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-phenylalanyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-phenylalanyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

PAGE 2-B

PAGE 3-A

PAGE 3-B

RN 374107-16-1 USPATFULL

CN

L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-tyrosyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-tyrosyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Yu

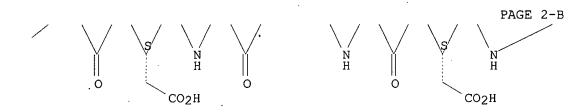
PAGE 1-A

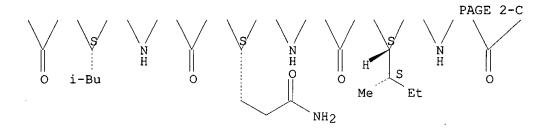
PAGE 1-B

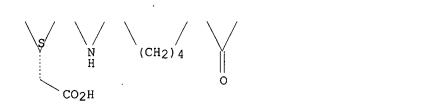
PAGE 1-C

PAGE 1-D

PAGE 2-D







RN 374107-17-2 USPATFULL

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-tryptophyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-tryptophyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-tryptophyl- (9CI) (CA INDEX NAME)

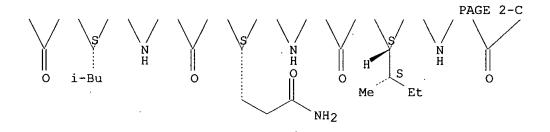
Absolute stereochemistry.

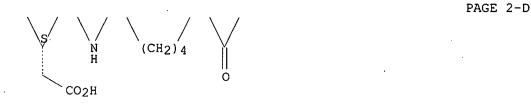
PAGE 1-A

PAGE 1-B

PAGE 1-C

PAGE 1-D





RN 374107-18-3 USPATFULL CN L-Lysine, qlycyl-L-phe

L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-glutamyl-L-alpha.-aspartyl-N6-L-lysyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

Bu-i

'PAGE 2-B

PAGE 3-A

RN 374107-19-4 USPATFULL

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-arginyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-alpha.-aspartyl-N6-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

$$H_2N$$
 H_2N
 H_2N

PAGE 1-C

PAGE 2-A

$$CO_2H$$
 H_2N
 NH_2
 H_2N
 NH_3
 CO_2H
 H_3N
 NH_4
 NH_5
 NH_5
 NH_6
 NH_6

PAGE 2-B

PAGE 3-A

RN 374107-20-7 USPATFULL

CN

L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-.gamma.-glutamyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-N6-L-.gamma.-glutamyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

PAGE 3-A

Yu

PAGE 5-A

RN 374107-21-8 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

PAGE 3-A

RN 374107-22-9 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-tyrosyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-tyrosyl-L-lysyl-L-arginyl-L-glutaminyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-C

PAGE 2-B

PAGE 2-C

RN 374107-23-0 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-tryptophyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-tryptophyl-L-lysyl-L-arginyl-N6-L-tryptophyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-C

PAGE 1-D

PAGE 2-B

PAGE 2-D

RN 374107-24-1 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-lysyl-L-lysyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-A

ОН

Yu

PAGE 4-A

PAGE 4-B

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Example 2: Assay for the cytolytic activity of the pore-forming toxins

Marked up version of paragraph [0076], on page 28, is below:

[0076] This example demonstrates that the inventive γ -glutamate-masked cytolytic peptides have specificity for cancer cells other than those expressing PSMA. This experiment, utilized a melittin analog having A [ϵ - γ]-Glu-[α - γ]-Glu at each of lysines 21 and 23: NH ₂-Gly-lle-Gly-Ala-Val-Leu-Lys-Val-Leu-Thr-Thr-Gly-Leu-Pro-Ala-Leu-lle-Ser-Trp-lle-Lys([ϵ - γ]-Glu-[α - γ]-Glu)-Arg-Lys([ϵ - γ]-Glu-[α - γ]-Glu)-Arg-Gln-Gln-COOH (SEQ ID NO: 12). Two prostate tumors (PNCap and DU0145), two ovarian tumors (HeLa and SK-OV-3), one lung tumor (LLC1) and one melanoma (B16) were tested. Cultured cells were treated with 1, 10, 50 or 100 μ M peptide. Results, depicted in Figure 4, show strong lytic activity against all tumors.

In the Claims:

Please amend the claims as follows:

5. (Amended) The procytotoxin of claim 4, having the following structure: Gly-Phe-Ile-Ala-Thr-Leu-Cys-Thr-Lys(R)-Val-Leu-Asp-Phe-Gly-Ile-Asp-Lys(R)-Leu-Ile-Gln-Leu-Ile-Glu-Asp-Lys(R) (SEQ ID NO: 1), wherein R is independently selected from the group consisting of the unmodified ε -amino group of the adjacent lysine residue, $[\varepsilon-\gamma]$ -Glu, $[\varepsilon-\gamma]$ -

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